

Division of Solid and Hazardous Waste
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Hazardous Waste Facility Permit

Under the provisions of N.J.S.A. 13:1E-1 et seq. known as the Solid Waste Management Act, this permit is hereby issued to:

Department of the Army
U. S. Army Armament Research, Development & Engineering Center
Picatinny Arsenal, NJ 07806-5000

For the Purpose of Operating a:	Hazardous Waste Treatment Facility
County:	Located on a Federal Enclave in Morris County
Under Facility Permit No.:	1409E1HP08
EPA ID No.:	EPA ID No. NJ3 210 020 704

This permit is subject to compliance with all conditions specified herein and all regulations promulgated by the Department of Environmental Protection.

This permit shall not prejudice any claim the State may have to Riparian land nor does it permit the registrant to fill or alter, or allow to be filled or altered, in any way, lands that are deemed to be Riparian, Wetlands, stream encroachment or flood plains, or within the Coastal Area Facility Review Act (CAFRA) zone or allow the discharge of pollutants to waters of this State without first acquiring the necessary grants, permits, or approvals from the Department of Environmental Protection or the U.S. Environmental Protection Agency.

March 14, 2000
Issuance Date

Thomas Sherman, Assistant Director
Division of Solid and Hazardous Waste

April 14, 2000
Effective Date

May 12, 2003
Modified

April 14, 2010
Expiration Date

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Scope of Permit

The conditions of this permit are based on the New Jersey hazardous waste regulations at N.J.A.C. 7:26G and on the permit application submitted by the permittee. N.J.A.C. 7:26G “incorporates by reference” (with limited exception) the Federal hazardous waste regulations found at Parts 124, 260-266, 268 and 270, Title 40 of the Code of Federal Regulations (C.F.R.). In order to eliminate confusion, and to clearly describe the precise obligations that are imposed upon the permittee, only the specific Federal regulatory citations are listed in the conditions of this permit. For the applicable State regulatory citations, refer to N.J.A.C. 7:26G.

This permit, along with the referenced permit application documents herein specified, shall constitute the sole Hazardous Waste Facility Permit for the construction, testing and operation of a hazardous waste incineration facility by the Department of the Army, U. S. Army Armament Research, Development and Engineering Center (U. S. Army ARDEC), located in Morris County, New Jersey. Any registration, Approval or Permit previously issued by the Division of Solid and Hazardous Waste, Office of Permitting and Technical Programs, or its predecessor agencies, is hereby superseded. The permittee need not comply with the conditions of this permit to the extent and for the duration such non-compliance is authorized by an emergency permit (40 C.F.R. 270.61).

Section I of this permit contains general conditions applicable to all hazardous waste facilities. Section II of this permit contains general conditions applicable to the U. S. Army ARDEC hazardous waste management activities. Section III of this permit contains specific conditions applicable to the U. S. Army ARDEC facility.

Description of Hazardous Waste Activities

The U.S. Army ARDEC facility has the responsibility for the research and development of numerous armament items, including pilot-level production of explosives, propellants, and metal parts. The research, production, and testing activities at the facility result in the generation of hazardous waste. These wastes are stored and/or treated on-site.

This permit authorizes the construction, testing and operation of an incinerator and its associated equipment for the treatment of waste propellants and explosives generated at the facility. The incinerator is to take the place of open burning as the method for treatment of these wastes. The incineration system includes a waste receiving and preparation area, a rotary kiln combustion chamber followed by a secondary combustion chamber, and an air pollution control system.

Modified 05/12/03

A maximum of eight hundred (800) pounds per day of waste propellants and explosives may be processed into a waste/water slurry in the receiving and preparation area. The system will utilize four (4) tanks with a total capacity of one thousand two hundred (1,200) gallons, two hoppers and a grinder for processing of waste/water slurry prior to incineration. Another tank, with a capacity of nine thousand five hundred (9,500) gallons, is exempt from the requirements of this permit and will be used to store incineration blowdown water. Hazardous waste solvents contaminated with explosives will be fed to the incinerator from a twenty (20) gallon drum. The maximum feed rate of hazardous waste to the rotary kiln combustion chamber shall be 0.75 gallons per minute.

Modified 05/12/03

Summary of Permit Compliance Conditions

The permittee shall submit the letter stating that construction has been completed as required by Condition 7(b) of Section III of this permit.

The permittee shall obtain the Department's approval for use of the continuous emissions monitors prior to the trial burn as required by Conditions 1(a)(6)(iii) and 8(c) of Section III of this permit.

The permittee shall submit the certification of completion of the trial burn, the trial burn results and the Notification of Compliance within ninety (90) days of completion of the trial burn as required by Condition 8(p) of Section III of this permit.

The permittee shall submit the results of the post-trial burn risk assessment within thirty (30) days of notification of the Department's approval of the trial burn results as required by Condition 8(r) of Section III of this permit.

Class 3 Permit Modification Dated 05/12/03

The permit was modified due to design changes resulting from the need to comply with 40 C.F.R. Part 264 Subpart CC, Air Emission Standards for Tanks, Surface Impoundments, and Containers, and 40 C.F.R. Part 63 Subpart EEE, National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors. Design changes included the additions of an emission control system for the waste/water slurry processing tanks, a system to feed solvent waste to the incinerator, and a wet electrostatic precipitator (WESP) to the air pollution control system. The design changes also eliminated the incineration of scrubber blowdown water. The blowdown water will be processed through the facility's waste water system. As a result, the scrubber blowdown storage tank is now exempt from the requirements of this permit.

Section I

General Conditions Applicable to All Permits (40 C.F.R. 270.30)

1. Duty to Comply

The permittee must comply with all conditions of this permit, except that the permittee need not comply with the conditions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit. (See 40 C.F.R. 270.61). Any permit noncompliance, except under the terms of an emergency permit, constitutes a violation of the appropriate Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

2. Duty to Reapply

- (a) If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- (b) A complete application for a new permit shall be submitted at least one hundred eighty (180) days prior to the expiration date of this permit.

3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Need to Mitigate

In the event of noncompliance with the permit, the permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment.

5. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

6. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

7. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege.

8. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any relevant information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

9. Inspection and Entry

The permittee shall allow an authorized representative of the Department upon the presentation of credentials and other documents as may be required by law to:

- (a) Enter at reasonable times upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Resource Conservation and Recovery Act (RCRA), any substances or parameters at any location.

10. Monitoring and Records

- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for

continuous monitoring instrumentation, copies of all reports required by this permit, the certification required by 40 C.F.R. 264.73(b)(9) of this chapter, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report, certification, or application. This period may be extended by request of the Department at any time. The permittee shall maintain records from all ground-water monitoring wells and associated ground-water surface elevations, for the active life of the facility, and for disposal facilities for the post-closure care period as well.

- (c) Records for monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) analyses were performed;
 - (4) The individual(s) who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.

11. Signatory Requirements

All applications, reports, or information submitted to the Department shall be signed and certified (see 40 C.F.R. 270.11).

12. Reporting Requirements

(a) Planned Changes

The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility.

(b) Anticipated Noncompliance

- (1) The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. For a new facility, the permittee may not treat, store, or dispose of hazardous waste; and for a facility being modified, the permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility except as provided in 40 C.F.R. 270.42, until:

- (i) The permittee has submitted to the Department by certified mail or hand delivery a letter signed by the permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and
- (ii) (A) The Department has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or
(B) If, within fifteen (15) days of the date of submission of the letter in Condition 12(b)(1)(i) of this section of the permit, the permittee has not received notice from the Department of its intent to inspect, prior inspection is waived and the permittee may commence treatment, storage, or disposal of hazardous waste.

(c) Transfers

This permit is not transferable to any person except after notice to the Department. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under RCRA. (See 40 C.F.R. 270.40).

(d) Monitoring Reports

Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(e) Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.

(f) Twenty-four Hour Reporting

- (1) The permittee shall report any noncompliance which may endanger health or the environment orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, including:
 - (i) Information concerning the release of any hazardous waste that may cause an endangerment to public drinking water supplies.
 - (ii) Any information of a release or discharge of hazardous waste or of a fire or explosion from the hazardous waste management facility,

which could threaten the environment or human health outside the facility.

- (2) The description of the occurrence and its cause shall include:
 - (i) Name, address, and telephone number of the owner or operator;
 - (ii) Name, address, and telephone number of the facility;
 - (iii) Date, time, and type of incident;
 - (iv) Name and quantity of material(s) involved;
 - (v) The extent of injuries, if any;
 - (vi) An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
 - (vii) Estimated quantity and disposition of recovered material that resulted from the incident.
- (3) A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Department may waive the five (5) day written notice requirement in favor of a written report within fifteen (15) days.
- (4) Oral notification shall be provided to the NJDEP Hotline at 1-877-WARNDEP [1-877-927-6337]. Written notification shall be provided to the Bureau of Hazardous Waste and Transfer Facilities and the Bureau of Hazardous Waste Compliance and Enforcement at the addresses provided in Condition 10 of Section II of this permit.

(g) Biennial Report

A biennial report must be submitted covering facility activities during odd numbered calendar years (See 40 C.F.R. 264.75).

(h) Other Noncompliance

The permittee shall report all instances of noncompliance not reported under paragraphs (d), (e) and (f) of this Condition of the permit at the time monitoring

reports are submitted. The reports shall contain the information listed in paragraph (f) of this Condition of the permit.

(i) Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

End of Section I

Section II

General Conditions Applicable to U. S. Army ARDEC

1. Permit Modification or Revocation and Reissuance

Cause for, and procedures of, modification, or revocation and reissuance of this permit shall be as provided under 40 C.F.R. 270.41.

2. Personnel Training (40 C.F.R. 264.16)

- (a) Facility personnel shall successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that insures the facility's compliance with the requirements of 40 C.F.R. 264.16, as stated in the facility's Part B permit application, and as referenced in Condition 11(b) of Section II of this permit. New employees shall be trained within six (6) months of the date of employment.
- (b) The training program shall be maintained with records and documentation describing the type and amount of both introductory and continuing training that has been and will be given to each person engaged in hazardous waste management at the facility.
- (c) The permittee shall keep the training records on current personnel until closure of the facility; training records on former employees shall be kept for at least three (3) years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

3. Preparedness and Prevention (40 C.F.R. 264.30 through 264.34)

The facility shall be designed, constructed, maintained and operated to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to the air, soil, surface water or groundwater which could threaten human health or the environment.

- (a) The facility shall be equipped with emergency equipment, including but not limited to:
 - (1) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;
 - (2) A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams;

- (3) Portable fire extinguisher, fire control equipment, spill control equipment, and decontamination equipment; and
- (4) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.
- (b) All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, shall be tested and maintained as necessary to assure its proper operation in time of emergency.

4. Contingency Plan (40 C.F.R. 264.50 through 264.56)

- (a) The provisions of the Contingency Plan included in the Part B permit application plus all amendments, revisions and modifications thereof subsequently submitted for review and accepted by the Department, and as referenced in Condition 11(b) of Section II of this permit, shall be carried out immediately whenever there is a fire, explosion or release of hazardous waste constituents which could threaten health or the environment.
- (b) When an emergency coordinator determines that the facility has had a discharge, fire, or explosion which could threaten human health or the environment outside the facility, the emergency coordinator shall immediately notify the local Fire Department and local Police Department if an assessment indicates that evacuation of local areas may be advisable. The emergency coordinator shall be available to help officials decide if local areas should be evacuated. The telephone numbers are:

POLICE

Wharton Borough	(973) 366-0557
Rockaway Township	(973) 625-4000
Rockaway Borough	(973) 989-7000
Dover	(973) 366-0302
Jefferson Township	(973) 697-1300

FIRE

Rockaway Township	(973) 625-4000
Jefferson Township	(973) 697-1300
Dover	(973) 366-0301
New Jersey Forest Service	(973) 827-6100
New Jersey National Guard	(973) 724-4551

- (c) (1) If the facility has a discharge, fire, or explosion which could threaten human health or the environment, the following shall be notified immediately:

New Jersey Department of Environmental Protection
Communication Center/Trenton Dispatch
Bureau of Communication and Support Services
Trenton, NJ 08625
Telephone 1-877-WARNDEP (24 Hours)

- (2) Additionally, if the emergency coordinator determines that the facility has had a discharge, fire, or explosion which could threaten human health, or the environment, outside the facility, the emergency coordinator shall immediately notify:

National Response Center
2100 Second Street, SW
Washington, D.C. 20593
Telephone 1-800-424-8802 (24 Hours)

- (d) If the emergency coordinator determines that the facility has had a discharge, fire, or explosion which would threaten human health or the environment, the emergency coordinator shall immediately notify the agencies listed in Condition 4(c) of Section II of this permit. When notifying these agencies, the coordinator shall report the type of substance and the estimated quantity discharged, if known; the location of the discharge; actions the person reporting the discharge proposes to take to contain, clean up and remove the substance if any and any other information concerning the discharge which the Department may request at the time of notification.
- (e) The owner or operator shall note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within fifteen (15) days after the incident, the owner or operator shall submit a written report on the incident to the Department. The report shall include, but not be limited to:
- (1) Name, address, and telephone number of the owner or operator;
 - (2) Name, address, and telephone number of the facility;
 - (3) Date, time, and type of incident;
 - (4) Name and quantity of material(s) involved;
 - (5) The extent of injuries, if any;
 - (6) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
 - (7) An estimated quantity and disposition of recovered material that resulted from the incident.

5. Security (40 C.F.R. 264.14)

- (a) The permittee must maintain the security procedures as described in the facility's Part B permit application plus all amendments, revisions and modifications thereof subsequently submitted for review and accepted by the Department, and as referenced in Condition 11(a) of Section II of this permit.
- (b) The permittee shall prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of the facility.
 - (1) A facility shall have:
 - (i) A twenty-four (24) hour surveillance system which continuously monitors and controls entry onto the active portion of the facility; or
 - (ii) An artificial or natural barrier, which completely surrounds the active portion of the facility; and a means to control entry, at all times, through the gates or other entrances to the active portion of the facility.
 - (2) The requirements of paragraph (b)(1) are satisfied if the hazardous waste storage, treatment or disposal site is located in a facility which itself has a surveillance system, or a barrier and a means to control entry, which complies with the requirements of subparagraph (b)(1)(i) or (b)(1)(ii).
 - (3) The owner or operator shall post a sign with the legend, "Danger - Unauthorized Personnel Keep Out", at each entrance to the active portion of a facility, and at other locations, in sufficient numbers to be seen from any approach to this active portion. The legend shall be written in English and in any other language prevalent in the area surrounding the facility and must be legible from a distance of at least twenty-five (25) feet. Existing signs with a legend other than "Danger - Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous.

6. Termination of a Permit (40 C.F.R. 270.43)

The following are causes for terminating a permit during its term or for denying a permit renewal application:

- (a) Noncompliance with any condition of this permit; or
- (b) The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time; or

- (c) A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.

7. Operating Record (40 C.F.R. 264.73)

The permittee shall keep a written operating record at the facility in which the information required under 40 C.F.R. 264.73(b) shall be recorded. The information shall be recorded as it becomes available and maintained in the operating record until closure of the facility.

8. Permit Limitations (40 C.F.R. 270.4(c))

The issuance of this permit does not authorize any injury to persons or property or invasion of other private rights or any infringement of applicable Federal, State, or local laws or regulations.

9. Compliance with Other State Regulations and Statutes

The permittee shall comply with all regulations of the Department of Environmental Protection and other State Statutes applicable to the facility. Regulations are effective upon publication in the New Jersey Register or as otherwise indicated in the Notice of Adoption in the New Jersey Register.

10. Submission of Documents Required by Permit Conditions

The permittee shall submit all permit compliance documents required by this permit to the following:

- (a) New Jersey Department of Environmental Protection
Division of Solid and Hazardous Waste
Office of Permitting and Technical Programs
Bureau of Hazardous Waste and Transfer Facilities
P.O. Box 414
Trenton, NJ 08625-0414
- (b) New Jersey Department of Environmental Protection
Solid and Hazardous Waste Enforcement
Bureau of Hazardous Waste Compliance and Enforcement - Northern Section
1259 Route 46 East
Parsippany, NJ 07054-4191

11. Referenced Permit Application Documents

- (a) The permittee shall operate the facility, and construct or install associated appurtenances thereto, in accordance with the regulations contained in

40 C.F.R. Parts 260 through 270, the conditions of this permit, and the following permit application documents:

- (1) The RCRA Part B Permit Application dated April 1992 for Picatinny Arsenal, Department of the Army, ARDEC, prepared by Anderson-Mulholland & Associates, Inc. and certified by Michael Clune, Chief, SSEO, U.S. Army ARDEC, William R. Holmes, Brigadier General, U.S. Army, Thomas Solecki, Chief, Environmental Affairs Division, U.S. Army ARDEC, O. T. Perry, Chief, Surety & Ammunition Division, U.S. Army ARDEC and John F. Pastuck, Chief, Demilitarization Branch, U.S. Army ARDEC.
- (2) The Environmental Assessment for the Proposed Energetic Material Disposal Facility at Picatinny Arsenal, New Jersey, prepared for the U.S. Army Corps of Engineers, prepared by HUNTER/ESE, and dated August 1990.
- (3) The August 4, 1992, submittal for the U. S. Army ARDEC, signed by O. T. Perry.
- (4) The Design of the Energetic Material Disposal Facility at Picatinny Arsenal, New Jersey, 100% Final Design, Task AC-8, prepared by Roy F. Weston, Inc., dated September 11, 1992, and submitted by Thomas J. Solecki.
- (5) The April 5, 1993, Response to a Technical Notice of Deficiency for the U. S. Army ARDEC, signed by Thomas J. Solecki.
- (6) The November 8, 1994, Response to a Technical Notice of Deficiency for the U. S. Army, ARDEC, signed by O. T. Perry.
- (7) The September 20, 1995, Response to a Technical Notice of Deficiency for the U. S. Army ARDEC, signed by O. T. Perry.
- (8) The November 1996 Pretrial Burn Risk Assessment for the U. S. Army ARDEC, prepared by IT Corporation, and submitted by O. T. Perry.
- (9) The October 23, 1997, Response to a Technical Notice of Deficiency for the U. S. Army ARDEC, signed by Thomas J. Solecki.
- (10) The February 17, 1998, submittal from U. S. Army ARDEC, signed by Thomas J. Solecki.
- (11) The March 24, 1998, submittal from U. S. Army ARDEC, signed by Thomas J. Solecki.

- (12) The June 9, 1998, submittal from U. S. Army ARDEC, signed by Thomas J. Solecki.
- (13) The September 23, 1998, submittal from U. S. Army ARDEC, signed by Thomas J. Solecki.
- (14) The November 3, 1998, submittal from the U. S. Army ARDEC, signed by Thomas J. Solecki.
- (15) The Installation Contingency Plan for U. S. Army ARDEC submitted on February 1, 1999, by Thomas J. Solecki.
- (16) The February 11, 1999, letter from U. S. Army ARDEC, signed by Thomas J. Solecki.
- (17) The May 26, 1999, submittal from U. S. Army ARDEC, signed by Thomas J. Solecki.
- (18) The June 8, 1999, submittal from U. S. Army ARDEC, signed by Thomas J. Solecki.
- (19) The August 10, 1999, letter from U. S. Army ARDEC, signed by Thomas J. Solecki.
- (20) The November 16, 1999, letter from U. S. Army ARDEC, signed by Thomas J. Solecki.
- (21) The engineering drawings included in the Energetic Waste Disposal Facility, Picatinny Arsenal, 100% Final Design Submittal, Appendix I, Sheets G-1 through G-7, C-1 through C-10, S-1 through S-8, S-11 through S-17, M-1 through M-5, M-7 through M-15, E-1 through E-13 and I-1 through I-7, signed and sealed by William H. Brown, P.E.
- (22) The following engineering drawings included in the Energetic Waste Disposal Facility, Picatinny Arsenal, 100% Final Design Submittal, Appendix I, that were revised on September 26, 1997, and signed and sealed by Charles Pfrommer, Jr.: Sheets S-9, S-10 and M-6.
- (23) The Mechanical Design Calculations for the Slurry Make Up Tank, TK-1, Slurry Holding Tanks, TK-2A, TK-2B and TK-3, and Scrubber Blowdown Tank, TK-7, signed and sealed by James Edward Carter, P.E., on April 11, 1994.
- (24) The documents listed in Condition 11 of Section II of Hazardous Waste Facility Permit No. 1409E1HP05.

Added 05/12/03

- (25) The July 14, 2000, submittal from U. S. Army ARDEC, signed by Thomas J. Solecki, including the Explosive Waste Incinerator Air Pollution Control System Modification for MACT Compliance Preliminary Process Design, Revision A, dated July 2000, the Explosive Waste Incinerator RCRA Subpart CC Compliance System Preliminary Process Design, Revision A, dated July 2000, and the Maximum Achievable Control Technology (MACT) Emissions and Control Technology Assessment for the Explosive Waste Incinerator, dated July 2000.

Added 05/12/03

- (26) The Post-Comprehensive Performance Test Risk Assessment Work Plan for Explosive Waste Incinerator, Revision 0, dated June 2001, submitted on July 24, 2001, and signed by Thomas J. Solecki.

Added 05/12/03

- (27) The November 14, 2001, submittal from U. S. Army ARDEC signed by Thomas J. Solecki, including the Comprehensive Performance Test Plan for Explosive Waste Incinerator, Revision 1, dated August 2001.

Added 05/12/03

- (28) The following revised engineering drawings included in the November 14, 2001, submittal from U. S. Army ARDEC signed and sealed by Charles Pfrommer, P.E.: Sheets G-1 (Rev. 2), G-2 (Rev. 1), G-3 (Rev.1), G-4 (Rev. 4), G-5 (Rev. 5), G-6 (Rev. 4), G-7 (Rev. 5), G-8 (Rev. 4), G-9 (Rev. 3), M-21 (Rev. B), M-23 (Rev. A), and M-36 (Rev. 2), and Drawing Numbers D2-1 (Rev. 1), D2-2 (Rev. 1), 407498.06030200-E-00-001 (Rev. B), and 407498.06030200-E-00-002 (Rev. A).

In case of conflict, the applicable hazardous waste management regulations contained in 40 C.F.R. shall have precedence over the conditions of this permit, and the conditions of this permit shall have precedence over the Part B permit application documents listed above.

- (b) One complete set of the permit application documents listed in Condition 11(a) above, this Hazardous Waste Facility Permit, and all records, reports and plans as may be required pursuant to this permit shall be kept on-site and shall be available for inspection by authorized representatives of the Department upon presentation of credentials. The records, reports and plans required pursuant to this permit include the following:
 - (1) The description of the personnel training program and the records required by Condition 2 of Section II of this permit and 40 C.F.R. 264.16.
 - (2) The Contingency Plan required by Condition 4 of Section II of this permit and 40 C.F.R. 264.50, and specifically the plan submitted to the Department

on February 1, 1999, along with the April 1992 addendum to the Contingency Plan.

- (3) The written Operating Record required by Condition 7 of Section II of this permit and 40 C.F.R. 264.73.
- (4) The Waste Analysis Plan outlined in Condition 3 of Section III of this permit and as required by 40 C.F.R. 264.13, and specifically the plan included in the April 1992 RCRA Part B Permit Application as revised on April 5, 1993, October 23, 1997, June 9, 1998, September 23, 1998, and June 8, 1999.
- (5) The Inspection Schedule required by 40 C.F.R. 264.15(b) and the records required by Condition 4 of Section III of this permit.
- (6) The Closure Plan required by Condition 6 of Section III of this permit and 40 C.F.R. 264.112, specifically the plan included in the April 5, 1993, submittal referenced in Condition 11(a) of Section II of this permit.

End of Section II

Section III

Specific Facility Conditions Applicable to U. S. Army ARDEC

1. Authorized Activities

(a) Incineration

Modified 05/12/03

(1) Process Description

The incineration system shall consist of an unloading area, a drum weighing station, two (2) drum dumpers, two (2) feed hoppers, a conveyor system, a metal detector, a grinder, a slurry make up tank, two (2) slurry holding tanks, a slurry re-circulation loop, a waste solvent injection system, an oil fired rotary kiln, an oil fired secondary combustion chamber, a quench chamber, a fabric filter, a packed wet scrubber, a wet electrostatic precipitator (WESP), an induced draft fan, an exhaust stack, a scrubber blowdown storage tank, a control room and associated equipment.

The permittee shall transport solid propellant and explosive (P&E) wastes, in a variety of packaging types, to the incineration area where the wastes shall be weighed and placed into fifty-five (55) gallon drums. The operator shall then manually load the drums into one of the drum dumpers (DD-1 or DD-2). Combustible cartridge case material shall be loaded into DD-2. All other solid P&E wastes shall be loaded into DD-1. The remainder of the procedure shall be conducted remotely from the control room.

The operator shall dump the waste from the drum dumpers into the hoppers (DD-1 discharges to HP-1 and DD-2 discharges to HP-2), and the drums shall be automatically rinsed with water. The rinse water shall also be discharged to the hopper. One hopper (HP-2) shall discharge directly to the grinder. The other hopper (HP-1) shall discharge to a conveyor belt that leads to the grinder. While moving along the conveyor belt, the waste shall be continuously sprayed with water. The conveyor belt shall be equipped with a metal detection system that shall automatically shut down the system and discharge a metallic component to a reject container when such a component is detected in the waste.

While being fed to the grinder, sufficient water shall be added to the waste to maintain a grinder input ratio of at least five to one (5/1) water to waste. From the grinder, the waste/water shall fall into the slurry make-up tank (TK-1). Sufficient water shall be added during the grinding process to result in a water/waste weight ratio of at least three to one (3/1). The water/waste shall then be mixed to form a slurry.

From the slurry make-up tank, the slurry shall be transferred to one of the slurry holding tanks (TK-2A, TK-2B, or TK-3). While in the slurry holding tank, the slurry shall be continuously mixed and circulated through the re-circulation loop. When in compliance with the incineration operating requirements of this permit, slurry may be drawn off the re-circulation loop and fed to the countercurrent oil fired rotary kiln.

P&E contaminated solvent shall be brought to the incinerator area in twenty (20) gallons drums. Only one (1) drum of P&E contaminated solvent shall be located at the incinerator area at any time. Upon arrival at the incineration area, the drum shall immediately be placed in the solvent transfer station. From the transfer station, P&E contaminated solvent shall be metered into the slurry line for feed to the countercurrent oil fired rotary kiln. When empty, each drum shall be rinsed internally with water. The rinse water shall be metered to the slurry line for feed to the rotary kiln. Each drum shall be rinsed at least three (3) times prior to removal from the transfer station.

The gases formed within the kiln shall be drawn into the oil fired secondary combustion chamber (SCC) and then into the air pollution control system by the induced draft fan. Ash or solid combustion residue from the kiln and SCC shall be periodically released to fall directly into drums that are tightly sealed to the kiln and SCC.

After exiting the SCC, combustion gases shall pass through a quench spray chamber, a fabric filter, a caustic scrubber, and a WESP prior to release to the atmosphere via the stack. Particulate matter removed in the quench chamber shall be collected in a drum. The fabric filter shall be automatically cleaned of particulate matter by pulsing with air when a specified pressure differential is reached. The particulate matter collected in the fabric filter shall be discharged to a hopper. Waste waters generated in the scrubber and WESP shall be stored in the scrubber blowdown tank prior to being discharged to the permittee's sanitary sewer system.

At the end of an incineration campaign, the permittee may also incinerate solids contaminated with P&E waste by feeding this material through a portal directly into the kiln.

All ash generated from the incineration system shall be managed in accordance with applicable hazardous waste requirements and shall be stored at an authorized hazardous waste storage area on-site prior to shipment off-site.

- (2) Upon completion of the construction/installation activities required by Condition 7 of Section III of this permit, the permittee is authorized to

incinerate the hazardous wastes specified in Condition 2 of Section III of this permit utilizing the incineration system detailed on the drawings and the application documents cited in Condition 11(a) of Section II of this permit. Hazardous waste incineration activities shall proceed in a phased approach as described below:

- (i) Shakedown Phase - For the period beginning with initial introduction of hazardous waste to the incinerator and ending with initiation of the trial burn, and only for the minimum time required to establish

incinerator operating conditions required to perform the trial burn, the permittee shall comply with the incinerator operating requirements of Condition 1(a)(5) of Section III of this permit. However, during this phase, the waste processed shall consist of only M1 propellant. The shakedown phase shall not exceed seven hundred twenty (720) hours of operating time while treating hazardous waste. The Department may extend the duration of this period once for up to seven hundred twenty (720) hours if good cause is demonstrated by the permittee.

- (ii) Trial Burn Phase - Upon completion of the shakedown phase, the permittee shall conduct a trial burn in accordance with Condition 8 of Section III of this permit.
 - (iii) Post-Trial Burn Phase - For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, and submission of the trial burn results and Notification of Compliance by the applicant, the permittee shall comply with the incinerator operating requirements of Condition 1(a)(5) of Section III of this permit. Upon postmark of the Notification of Compliance, the permittee shall comply with all operating requirements specified in the Notification of Compliance. If at any time during the preparation of the trial burn report the permittee believes that the incinerator may not have achieved the required performance standards, the permittee shall terminate operation of the incineration system.
 - (iv) Long-Term Operational Phase - After review of the trial burn results, Notification of Compliance and risk assessment required by Condition 8 of Section III of this permit, the Department will determine if the incineration system is capable of compliance with the required performance standards and, based on the results, may initiate a permit action, such as permit termination or permit modification to adjust the ranges in operating requirements to apply during long-term operation. If the Department does not initiate such an action, the permittee shall continue to comply with all operating requirements specified in the Notification of Compliance.
- (3) Unloading/Slurry Preparation Operating Requirements
- (i) The maximum amount of waste that is brought to the unloading area and processed in the slurry preparation area at one time shall be four hundred pounds (400 lbs). The maximum amount of waste that is brought to the unloading area and processed in the slurry preparation area in one day shall be eight hundred pounds (800 lbs);

- (ii) Only combustible cartridge case waste and liquid waste shall be placed in hopper HP-2 that discharges directly to the grinder. All other hazardous waste shall be placed in hopper HP-1 that discharges to the conveyor belt;
- (iii) While the grinder is in operation, the minimum ratio of the feed rates to the grinder of water to dry waste shall be to one (5:1) by weight;
- (iv) Sufficient water shall be added to the waste on the conveyor belt, in the grinder and in the slurry make-up tank to result in a slurry with a minimum ratio of water to dry waste of three to one (3:1) by weight; and
- (v) The permittee shall operate and maintain the alarm and interlock systems for the unloading/slurry preparation area as described in the Design of the Energetic Material Disposal Facility at Picatinny Arsenal, New Jersey, 100% Final Design, Task AC-8, dated September 11, 1992.

(4) Incinerator Performance Standards

The permittee shall ensure that the incineration system is designed, constructed, and maintained so that, when operated in accordance with the operating requirements of this permit or the operating requirements of the Notification of Compliance, as applicable, the system shall meet the performance standards listed below.

Compliance with the operating requirements specified in this permit or operating requirements of the Notification of Compliance, as applicable, will be regarded as compliance with the performance standards listed below. However, evidence that compliance with the operating requirements is insufficient to ensure compliance with the performance standards listed below may be "informational" justifying modification, revocation or re-issuance of this permit under 40 C.F.R. 270.41.

- (i) The incineration system must achieve a destruction and removal efficiency (DRE) of 99.99 percent for each principal organic hazardous constituent (POHC) designated for each waste feed. DRE shall be determined for each POHC using the following equation:

$$DRE = (W_{in} - W_{out})/W_{in} \times 100\%$$

Where:

W_{in} = mass feed rate of one POHC in the waste stream feeding the incinerator

W_{out} = mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere

- (ii) The emissions from the incineration system of the following constituents shall not exceed the concentration limits specified in the table below:

Constituents	Maximum Emission Concentration ¹
Dioxins and Furans	0.20 ng TEQ ² /dscm
Mercury	45 μ g/dscm
Lead and cadmium ³	Modified 05/12/03 120 μ g/dscm
Arsenic, beryllium and chromium ³	97 μ g/dscm
Carbon monoxide ⁴	100 ppmv
Hydrochloric acid and chlorine gas ^{3,5}	21 ppmv
Particulate matter	0.01 grains/dscf

¹ All concentration limits are based on correction to 7% oxygen

² TEQ is Toxicity Equivalence as defined in 40 C.F.R. 63.1201

³ Combined emissions

⁴ Hourly rolling average, dry basis

⁵ Expressed as hydrochloric acid equivalents, dry basis

- (iii) The emissions from the incineration system of the following constituents shall not exceed the mass limits specified in the table below:

Constituent	Maximum Emission Rate (grams/hour)
Antimony	14.0
Arsenic	0
Barium	21
Beryllium	0
Cadmium	0
Chromium	0.040
Lead	0.022
Mercury	0.042
Silver	0
Thallium	0

Constituent	Maximum Emission Rate (grams/hour)
Chlorine gas	19
Hydrogen chloride	9.08
Dioxins and furans	2.28E-8 TEQ ¹

¹ TEQ is Toxicity Equivalence as defined in 40 C.F.R. 63.1201

(5) Incinerator Operating Requirements

- (i) During start-up of the incineration system, only #2 fuel oil shall be fed into the rotary kiln and secondary combustion chambers. This period shall be of sufficient duration to bring the system safely to operating conditions and to determine that the unit is functioning properly.
- (ii) During the shakedown and post-trial burn phases defined in Condition 1(a)(2) of Section III of this permit, the permittee shall feed waste into the rotary kiln combustion chamber only under the following conditions. The conditions shall be maintained at all times while waste or waste residuals remain in the combustion chamber:

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- (A) For the shakedown phase, the hourly rolling average feed rate of M1 based waste slurry to the rotary kiln shall not exceed 0.75 gallons per minute. For the post-trial burn phase, the hourly rolling average feed rate of waste to the rotary kiln shall not exceed 0.75 gallons per minute or the average of the mean feed rates recorded during the trial burn runs of the low temperature trial burn test, whichever is less;

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- (B) Dunnage shall be fed to the rotary kiln through a portal in charges of no more than twenty pounds (20 lbs). The feed rate of charges to the rotary kiln shall not exceed one charge every ten minutes (10 min). Dunnage shall not be fed to the rotary kiln concurrently with waste/water slurry or P&E contaminated solvents;

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- (C) For the shakedown phase, no P&E contaminated waste solvents shall be fed to the rotary kiln. For the post-trial burn phase, the hourly rolling average feed rate of P&E contaminated waste solvents to the rotary kiln shall not exceed eight pounds per hour (8 lbs/hr);
- (D) The feed rates to the rotary kiln chamber of the following constituents shall not exceed the maximum values listed in the table below. However, during the shakedown phase, the feed limitation of Condition 1(a)(2)(i) shall also apply;

Constituent	Maximum Feed Rate (grams/hour)
Antimony	14
Arsenic	0
Barium	21
Beryllium	0
Cadmium	0
Chromium	0.040
Lead	340 [*]
Mercury	1.0 [*]
Silver	0
Thallium	0
Ash	1816 [*]
Chlorine	908 [*]

* The stated value or the average of the mean feed rates of the constituent fed during the trial burn runs used to demonstrate compliance with the emissions standard for that constituent, whichever is less.

- (E) No waste shall be fed directly to the secondary combustion chamber;
- (F) The heat input, on a dry basis, to the rotary kiln shall not exceed two million five hundred thousand British Thermal Units per hour (2,500,000 BTU/hr);

- (G) The heat input to the secondary combustion chamber shall not exceed one million British Thermal Units per hour (1,000,000 BTU/hr);
- (H) For the shakedown phase, the hourly rolling average temperature of the combustion gases at the exit of the rotary kiln shall be maintained at no less than one thousand four hundred degrees Fahrenheit (1400°F). For the post-trial burn phase, the hourly rolling average temperature of the combustion gases at the exit of the rotary kiln shall be maintained at no less than one thousand four hundred degrees Fahrenheit (1400°F) or the average of the mean temperatures recorded during the trial burn runs of the low temperature trial burn test, whichever is greater;
- (I) For the shakedown phase, the hourly rolling average temperature of the combustion gases at the exit of the rotary kiln shall not exceed one thousand nine hundred degrees Fahrenheit (1900°F). For the post-trial burn phase, the hourly rolling average temperature of the combustion gases at the exit of the rotary kiln shall not exceed one thousand nine hundred degrees Fahrenheit (1900°F) or the average of the mean temperatures recorded during the trial burn runs of the high temperature trial burn test, whichever is less;
- (J) For the shakedown phase, the hourly rolling average temperature of the combustion gases at the exit of the secondary combustion chamber shall be maintained at no less than one thousand eight hundred degrees Fahrenheit (1800°F). For the post-trial burn phase, the hourly rolling average temperature of the combustion gases at the exit of the secondary combustion chamber shall be maintained at no less than one thousand eight hundred degrees Fahrenheit (1800°F) or the average of the mean temperatures recorded during the trial burn runs of the low temperature trial burn test, whichever is greater;
- (K) For the shakedown phase, the hourly rolling average combustion gas flow rate at the stack shall not exceed one thousand two hundred thirty actual cubic feet per minute (1,230 acfm) at one hundred ninety degrees Fahrenheit (190°F). For the post-trial burn phase, the hourly rolling average combustion gas flow rate at the stack shall not exceed one thousand two hundred thirty actual cubic feet per minute (1,230 acfm) at one hundred ninety degrees

Fahrenheit (190°F) or the maximum flow rate recorded during the low temperature trial burn test, whichever is less;

- (L) For the shakedown phase, the instantaneous pressure in the rotary kiln shall not exceed –0.08 inches water gauge. For the post-trial burn phase, the instantaneous pressure in the rotary kiln shall not exceed –0.08 inches water gauge or the average of the mean pressures recorded during the trial burn, whichever is less;
- (M) The pressure in the secondary combustion chamber shall not exceed the pressure in the rotary kiln;
- (N) For the shakedown phase, the hourly rolling average temperature of the combustion gases exiting the primary quench shall not exceed four hundred seventy-five degrees Fahrenheit (475°F). For the post-trial burn phase, the hourly rolling average temperature of the combustion gases exiting the primary quench shall not exceed four hundred seventy-five degrees Fahrenheit (475°F), the average of the mean temperatures recorded during the trial burn runs used to demonstrate compliance with the dioxin/furan emission standard, or the average mean temperatures recorded during the trial burn runs used to demonstrate compliance with the metals emission standards, whichever is less;
- (O) The hourly rolling average pressure drop across the baghouse shall be maintained at no less than one inch water column (1" wc) and no greater than eight inches water column (8" wc);
- (P) The temperature of the combustion gases entering the scrubber shall not exceed two hundred twenty-five degrees Fahrenheit (225°F);
- (Q) For the shakedown phase, the hourly rolling average scrubber water flow rate shall be maintained at no less than twenty gallons per minute (20 gal/min). For the post-trial burn phase, the hourly rolling average scrubber water flow rate shall be maintained at no less than twenty gallons per minute (20 gal/min) or the average of the mean flow rates recorded during the trial burn runs used to demonstrate compliance with the hydrogen chloride and chlorine gas emission standard, whichever is greater;

- (R) For the shakedown phase, the hourly rolling average pH of the water exiting the scrubber shall be maintained at no less than five (5). For the post-trial burn phase, the hourly rolling average pH of the water exiting the scrubber shall be maintained at no less than five (5) or the average of the mean pH's recorded during the trial burn runs used to demonstrate compliance with the hydrogen chloride and chlorine gas emission standard, whichever is greater;
- (S) For the shakedown phase, the hourly rolling average scrubber water blowdown rate shall be maintained at no less than 0.062 gallons per minute. For the post-trial burn phase, the hourly rolling average scrubber water blowdown rate shall be maintained at no less than 0.062 gallons per minute or the average of the mean blowdown rates recorded during the trial burn runs used to demonstrate compliance with the particulate emission standard, whichever is greater;
- (T) The concentration of carbon monoxide in the dry stack gas adjusted to seven percent (7%) oxygen shall not exceed one hundred parts per million (100ppm) on an hourly rolling average;
- (U) For the shakedown phase, the concentration of oxygen in the stack gas shall be maintained at no less than three percent (3%) by volume. For the post-trial burn phase, the concentration of oxygen in the stack gas shall be maintained at no less than three percent (3%) by volume or the lowest average concentration of oxygen in the stack gas measured during any run of the trial burn, whichever is greater;
- (V) The hourly rolling average pressure drop across the scrubber shall be maintained at no less than one inch water column (1" wc); and
- (W) The hourly rolling average scrubber water feed pressure shall be maintained at no less than two hundred seventy-seven inches water column (277" wc).
- (X) For the shakedown phase, the hourly rolling average scrubber tank volume shall be maintained at no less than forty-seven gallons (47 gal). For the post-trial burn phase, the hourly rolling average scrubber tank volume shall be maintained at no less than forty-seven gallons (47 gal) or

the average of the mean scrubber tank volumes recorded during the trial burn test used to demonstrate compliance with the particulate emission standard, whichever is greater.

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- (Y) For the shakedown phase, the hourly rolling average secondary power input to the WESP shall be maintained at no less than four kilovoltamperes (4 KVA). For the post-trial burn phase, the hourly rolling average secondary power input to the WESP shall be maintained at no less than four kilovoltamperes (4 KVA) or the average of the mean secondary power inputs recorded during the trial burn test used to demonstrate compliance with the particulate emission standard, whichever is greater.

(6) Incinerator Monitoring Requirements

The permittee shall operate, maintain and calibrate systems to monitor and record incineration system parameters as required below. The permittee shall include the monitoring records in the facility's operating log:

- (i) While the incinerator is in operation, the permittee shall continuously monitor and record the following parameters:

Modified 05/12/03

- (A) The instantaneous and hourly rolling average combined feed rates of waste/water slurry and P&E contaminated solvents to the rotary kiln;

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- (B) The instantaneous and hourly rolling average feed rates of P&E contaminated solvents to the rotary kiln;
- (C) The instantaneous and hourly rolling average temperatures of combustion gases at the exit of the rotary kiln;
- (D) The instantaneous and hourly rolling average temperatures of combustion gases at the exit of the secondary combustion chamber;
- (E) The instantaneous and hourly rolling average combustion gas flow rates at the stack;
- (F) The instantaneous pressure in the rotary kiln;

- (G) The instantaneous and hourly rolling average temperatures of the combustion gases exiting the quench;
- (H) The instantaneous and hourly rolling average pressure drops across the baghouse;
- (I) The instantaneous and hourly rolling average scrubber water flow rates;
- (J) The instantaneous and hourly rolling average pH's of the water exiting the scrubber;

- (K) The instantaneous and hourly rolling average concentration of carbon monoxide in the dry stack gas adjusted to seven percent (7%) oxygen;
- (L) The concentration of oxygen in the stack gas;
- (M) The instantaneous and hourly rolling average scrubber water blowdown flow rates;
- (N) The instantaneous and hourly rolling average pressure drops across the scrubber;
- (O) The instantaneous and hourly rolling average water feed pressures to the scrubber;
- (P) The instantaneous and hourly rolling average scrubber tank volumes; and

Added 05/12/03

- (Q) The instantaneous and hourly rolling average secondary power input to the WESP.
- (ii) The permittee shall monitor and record the following incineration system parameters as specified below:
- (A) For each charge of dunnage fed to the rotary kiln, a description of the type of material fed, its weight and the time it was charged shall be recorded;

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- (B) Each day prior to processing hazardous waste, the permittee shall utilize waste analysis data to verify and document that the waste to be processed that day will not exceed any of the maximum allowable constituent feed rates specified in Condition 1(a)(5)(ii)(D) of Section III of this permit and that equipment designated for heavy liquid service will not be placed in light liquid service as defined in 40 C.F.R. 264.1031. For each batch of waste to be processed, the permittee shall record the type and source of each waste, the weight of each waste type, and the weight of water to be added. The permittee shall calculate and record the weight and predicated feed rate of each constituent listed in Condition 1(a)(5)(ii)(D) of Section III of the permit and shall compare the predicted feed rate of each constituent to the maximum allowable feed rate found in that permit condition.

- (C) At least every thirty (30) minutes during operation, the permittee shall monitor and record the fuel oil feed rates to the rotary kiln and secondary combustion chamber, and verify and document that the heat inputs do not exceed the

limits specified in Conditions 1(a)(5)(ii)(F) and (G) of Section III of this permit; and

- (D) At least every thirty (30) minutes during operation, the permittee shall monitor and record the temperature of the combustion gases entering the scrubber and shall verify that the temperature does not exceed the limit specified in Condition 1(a)(5)(ii)(P) of Section III of this permit.
 - (iii) Continuous emission monitors shall comply with EPA Performance Specification 3 for the oxygen monitor and Performance Specification 4A for the carbon monoxide monitor (40 C.F.R. Part 60 Appendix B) and 40 C.F.R. Part 60 Appendix F. The design specifications, installation details, and calibration, operating, and maintenance procedures for all required continuous emissions monitors (CEM's) must be approved by the Department prior to the trial burn; and
 - (iv) The permittee shall install, operate, maintain and calibrate all non-CEM monitoring systems in accordance with manufacturer's specifications and recommendations unless directed otherwise by Department regulation or request.
- (7) Automatic Waste Feed Shutoff Requirements
- (i) Except when performing the trial burn required by Condition 8 of Section III of this permit, the permittee shall operate and maintain the incineration system to immediately and automatically shut off waste feed to the incinerator when the following deviations from operating requirements occur:
 - (A) The feed rate of waste to the rotary kiln exceeds the limit specified in Condition 1(a)(5)(ii)(A) of Section III of this permit;

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- (B) The feed rate of P&E contaminated waste solvents exceeds the limit specified in Condition 1(a)(5)(ii)(C) of Section III of this permit;
- (C) The temperature of combustion gases at the exit of the rotary kiln decreases to less than the limit specified in Condition 1(a)(5)(ii)(H) of Section III of this permit or exceeds the limit specified in Condition 1(a)(5)(ii)(I) of Section III of this permit;

- (D) The temperature of the combustion gases at the exit of the secondary combustion chamber decreases to less than the limit specified in Condition 1(a)(5)(ii)(J) of Section III of this permit;
- (E) The combustion gas flow rate at the stack exceeds the limit specified in Condition 1(a)(5)(ii)(K) of Section III of this permit;
- (F) The pressure in the rotary kiln exceeds the limit specified in Condition 1(a)(5)(ii)(L) of Section III of this permit;
- (G) The temperature of the combustion gases exiting the primary quench exceeds the limit specified in Condition 1(a)(5)(ii)(N) of Section III of this permit;
- (H) The pressure drop across the baghouse decreases to less than the limit specified in Condition 1(a)(5)(ii)(O) of Section III of this permit;
- (I) The scrubber water flow rate decreases to less than the limit specified in Condition 1(a)(5)(ii)(Q) of Section III of this permit;
- (J) The pH of the water exiting the scrubber decreases to less than the limit specified in Condition 1(a)(5)(ii)(R) of Section III of this permit;
- (K) The concentration of carbon monoxide in the dry stack gas adjusted to seven percent (7%) oxygen exceeds the limit specified in Condition 1(a)(5)(ii)(T) of Section III of this permit;
- (L) The concentration of oxygen in the stack gas decreases to less than the limit specified in Condition 1(a)(5)(ii)(U) of Section III of this permit;
- (M) The scrubber water blowdown flowrate decreases to less than the limit specified in Condition 1(a)(5)(ii)(S) of Section III of this permit;
- (N) The pressure drop across the scrubber decreases to less than the limit specified in Condition 1(a)(5)(ii)(V) of Section III of this permit;

- (O) The scrubber water feed pressure decreases to less than the limit specified in Condition 1(a)(5)(ii)(W) of Section III of this permit;
- (P) The scrubber tank volume decreases to less than the limit specified in Condition 1(a)(5)(ii)(X) of Section III of this permit;
- (Q) The span of any continuous monitor required by Condition 1(a)(6)(i) of Section III of this permit, with the exception of the continuous carbon monoxide and oxygen monitors, is met or exceeded;
- (R) Any of the continuous monitors required by Condition 1(a)(6)(i) of Section III of this permit malfunction;
- (S) Any component of the automatic waste feed shutoff system fails; and

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- (T) The secondary power input to the WESP decreases to less than the limit specified in Condition 1(a)(5)(ii)(Y).

(ii) During an automatic waste feed shutoff episode:

- (A) The permittee shall continue to monitor the operating parameters in accordance with Condition 1(a)(6) of Section III of this permit;
- (B) The permittee shall maintain the combustion chamber temperatures required by Conditions 1(a)(5)(ii)(H), (I) and (J) of Section III of this permit while hazardous waste or hazardous waste residues remain in the combustion chamber;
- (C) The permittee shall continue to duct exhaust gases to the air pollution control system while hazardous waste or hazardous waste residues remain in the combustion chamber; and
- (D) The permittee shall not restart hazardous waste feed until the incineration system is operating in compliance with all operating requirements of this permit and the event has been entered into the permittee's operating log as required below.

- (iii) All occurrences of automatic waste feed shutoffs, including those not required by this permit, shall be entered into the facility's operating log. The entry shall include the time of the shutoff, the initiating parameter, the underlying cause, a description of the

actions taken in response, a description of any steps taken to prevent future shutoffs of the same type, and the time feed of hazardous waste was resumed.

- (8) The permittee shall not use or cause to be used any equipment or control apparatus unless:
- (i) All conditions and provisions of the "Permit to Construct, Install or Alter Control Apparatus or Equipment and Certificate to Operate Control Apparatus or Equipment" as required by N.J.A.C. 7:27-8 are fulfilled; and
 - (ii) All components connected or attached to, or serving the equipment and/or control apparatus are functioning properly and are in use in accordance with the "Permit to Construct, Install or Alter Control Apparatus or Equipment and Certificate to Operate Control Apparatus or Equipment" as required by N.J.A.C. 7:27-8.

(b) Tank Storage/Treatment

- (1) Upon completion of the construction/installation requirements of Condition 7 of Section III of this permit, the permittee is authorized to store/treat the hazardous wastes listed in Condition 2 of Section III of this permit in the tanks listed below prior to incineration. Storage and treatment shall be conducted in accordance with the description of the incineration activity in Condition 1(a) of Section III of this permit, as detailed on the engineering drawings cited in Condition 11(a) of Section II of this permit, and as follows:

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Tank ID #	Tank Usage	Materials of Construction	Capacity (gallons)
TK-1	Slurry Make-up	Stainless Steel	300
TK-2A	Slurry Holding	Stainless Steel	300
TK-2B	Slurry Holding	Stainless Steel	300
TK-3	Slurry Holding	Stainless Steel	300

- (2) The secondary containment structures for the tank systems shall be maintained free of cracks or gaps and shall have adequate capacity and impermeability to contain leaks, spills and precipitation from a 25-year, 24-hour rainfall event until the collected material is detected and removed. The secondary containment systems must be constructed or lined with materials that are compatible with the wastes being placed in the tank systems and

have sufficient strength and thickness to prevent failure. The secondary containment systems must be placed on a foundation or base capable of providing support to the system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression or uplift. The secondary containment systems shall be provided with a leak detection system and shall be maintained and operated to efficiently drain and remove liquids resulting from leaks, spills and precipitation.

- (3) Spilled or leaked waste and accumulated precipitation shall be removed from the secondary containment systems within twenty-four (24) hours, or in as timely a manner as is possible to prevent harm to human health and the environment.
- (4) The permittee shall operate the tanks in accordance with 40 C.F.R. 264.194.
- (5) The permittee shall comply with the requirements of 40 C.F.R. 264.198 for the management of ignitable or reactive wastes in the tanks authorized by Condition 1(b)(1) above.
- (6) The permittee shall comply with the requirements of 40 C.F.R. 264.199 for the management of incompatible wastes in the tanks authorized by Condition 1(b)(1) above. The permittee shall not place a waste that is incompatible with the material of construction of a tank, in that tank, prior to compliance with 40 C.F.R. 264.17(b). The permittee shall not place a hazardous waste in a tank system that has not been decontaminated and that previously held an incompatible waste or material prior to compliance with 40 C.F.R. 264.17(b).
- (7) In response to leaks or spills and disposition of leaking or unfit for use tank systems, the permittee shall comply with the requirements cited at 40 C.F.R. 264.196 as follows:
 - (i) Cessation of use; prevent flow or addition of wastes. The permittee must immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.
 - (ii) Removal of waste from tank system or secondary containment system.
 - (A) If the release was from the tank system, the permittee must, within twenty-four (24) hours after detection of the leak or, if the permittee demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the

environment and to allow inspection and repair of the tank system to be performed.

- (B) If the material released was to a secondary containment system, all released materials must be removed within twenty-four (24) hours or in as timely a manner as is possible to prevent harm to human health and the environment.
- (iii) Containment of visible releases to the environment. The permittee must immediately conduct a visual inspection of the release and, based upon that inspection:
 - (A) Prevent further migration of the leak or spill to soils or surface water; and
 - (B) Remove, and properly dispose of, any visible contamination of the soil or surface water.
- (iv) Notifications, reports.
 - (A) Any release to the environment, except as provided in the following paragraph (iv)(B), must be reported to the Department within twenty-four (24) hours of its detection. If the release has been reported pursuant to 40 CFR Part 302, that report will satisfy this requirement.
 - (B) A leak or spill of hazardous waste is exempted from the requirements of this paragraph if it is:
 - (1) Less than or equal to a quantity of one (1) pound, and
 - (2) Immediately contained and cleaned up.
 - (C) Within thirty (30) days of detection of a release to the environment, a report containing the following information must be submitted to the Department:
 - (1) Likely route of migration of the release;
 - (2) Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);
 - (3) Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within thirty (30) days, these data must be

submitted to the Department as soon as they become available.

- (4) Proximity to downgradient drinking water, surface water, and populated areas; and
 - (5) Description of response actions taken or planned.
 - (v) Provision of secondary containment, repair, or closure.
 - (A) Unless the permittee satisfies the requirements of paragraphs (v)(B) and (v)(C) below, the tank system must be closed in accordance with 40 C.F.R. 264.197 and Condition 6 of Section III of this permit.
 - (B) If the cause of the release was a spill that has not damaged the integrity of the system, the permittee may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.
 - (C) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service.
 - (vi) Certification of major repairs. If the permittee has repaired a tank system in accordance with paragraph (v) above, and the repair has been extensive (e.g., installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service unless the permittee has obtained a certification by an independent, qualified, registered, professional engineer in accordance with 40 C.F.R. 270.11(d) that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification must be submitted to the Department within seven (7) days after returning the tank system to use.
- (c) Miscellaneous Units
- (1) Upon completion of the construction/installation requirements of Condition 7 of Section III of this permit, the permittee is authorized to manage the hazardous wastes listed in Condition 2 of Section III of this permit in a grinder, as detailed on the engineering drawings cited in Condition 11(a) of Section II of this permit.
 - (2) The permittee shall manage hazardous waste in the grinder only as described in Condition 1(a) of Section III of this permit.

- (3) The permittee shall manage the grinder in compliance with the tank system requirements of Conditions 1(b)(2) through 1(b)(7) of Section III of this permit.

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- (d) The permittee shall not store or treat hazardous waste at any location at the facility other than those authorized in (a), (b), (c) and (f) of this Condition or by another valid hazardous waste facility permit issued by the Division of Solid and Hazardous Waste, Office of Permitting and Technical Programs.
- (e) The permittee must obtain a prior approval from the Division of Solid and Hazardous Waste, Office of Permitting and Technical Programs to make any changes or alterations to the authorized activities in this condition.

Added 05/12/03

- (f) Container Storage

- (1) Upon completion of the construction/installation requirements of Condition 7 of Section III of this permit, the permittee is authorized to store one (1) - twenty gallon (20 gal) drum of P&E contaminated waste solvents in the incinerator area.
- (2) The container storage area shall be designed, constructed, operated and maintained in accordance with the description of the incineration activity in Condition 1(a) of Section III of this permit and the application documents and engineering drawings cited in Condition 11(a) of Section II of this permit.
- (3) If a container holding hazardous waste is not in good condition (e.g. severe rusting, apparent structural defects) or it begins to leak, the permittee must transfer the hazardous waste from this container to a container that is in good condition.
- (4) The permittee must use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.
- (5) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.
- (6) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

- (7) The container storage area must be equipped with a containment system that has a base underlying the containers which is free of cracks and gaps and is sufficiently impervious to contain leaks, spills and accumulated precipitation until the collected material is detected and removed.
- (8) The permittee must remove spilled or leaked waste and accumulated precipitation from the containment system in as timely a manner as is necessary to prevent overflow of the collection system.
- (9) The permittee must not place incompatible wastes, or incompatible wastes and materials, in the same container, unless the permittee complies with 40 C.F.R. 264.17(b).
- (10) The permittee must not place hazardous waste in an unwashed container that previously held an incompatible waste or material.
- (11) A storage container holding hazardous waste that is incompatible with any waste or other material stored nearby must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

2. Authorized Wastes

- (a) The permittee is authorized to store and treat the following on-site generated hazardous wastes types in accordance with Condition 1 of Section III of this permit. The permittee shall not accept any wastes from off-site or from generators other than the U.S. Army ARDEC:

Modified 05/12/03

Description	Waste Number
Waste solid propellants, consisting of energetic constituents, primarily nitrocellulose, nitroglycerine, and nitroguanidine, as well as other additives such as stabilizers, ignition rate regulators and plasticizers	D003
	D005
	D007
	D008
	D009
	D030
Waste liquid propellants	D003
Waste explosives	D003
	D005
	D007
	D008
	D009

Description	Waste Number
Waste solvents contaminated with propellants and explosives	D001 D003 D005 D007 D008 D009 D030 F002 F003 F005
Dunnage materials, such as cardboard packaging, rags, gloves, personal protection suits, propelling charge bags and treated wood, associated with operation of the incineration system that may be contaminated with trace amounts of energetic material	D003 D005 D007 D008 D009 D030 F002 F003 F005

3. Waste Analysis and Quality Assurance Requirements

- (a) The permittee shall adhere to the provisions of the waste analysis plan cited in Condition 11(b) of Section II of this permit, and any subsequent revisions approved by the Division of Solid and Hazardous Waste, Office of Permitting and Technical Programs.
- (b) Each hazardous waste generated at this facility shall be fully identified and classified in accordance with 40 C.F.R. 261.3.
- (c) At a minimum, for wastes to be incinerated in the system authorized by Condition 1 of Section III of this permit, the permittee shall develop all of the information which must be known to store and incinerate the waste in accordance with the provisions of this permit. In addition to the information necessary for waste classification, the permittee shall obtain the information listed below for each waste stream to ensure compliance with the incineration requirements. If any hazardous waste to be incinerated cannot be fully identified and classified from knowledge of the process through which the waste was generated, then the permittee shall have representative samples of the waste analyzed using the methodologies listed in Condition 3(f) of Section III of this permit:

Parameters

Heating value

Metals*

Total chlorides

Ash

Volatile organic compounds (VOC's)

Semi-volatile organic compounds (SVOC's)

* Metals include antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium.

- (d) At a minimum, for wastes generated by the incineration system, the permittee must develop all the information that must be known to manage the waste on-site, as well as the information that must be known to treat and/or dispose of the waste at an authorized facility. At a minimum, the permittee shall analyze the wastes for the following parameters at the specified frequencies using the methodologies listed in Condition 3(f) of Section III of this permit.

Waste Stream	Frequency	Parameters
Incinerator Ash	Once per year	TCLP Metals ¹ SVOC's ² Total chlorides
Scrubber Blowdown	Once per month for the first three months of operation, then once per year thereafter	Metals ³ Ash Total chlorides PH

¹ Metals include barium, chromium, lead, mercury, and selenium.

² SVOC's include dibutylphthalate, diethylphthalate, dimethylphthalate, dinitrotoluene (2,4- and 2,6-), dioctylphthalate, diphenylamine, nitroglycerine, and resorcinol.

³ Metals include antimony, barium, chromium, lead, and mercury.

- (e) Sampling methods shall be in accordance with the procedures as outlined in the waste analysis plan cited in Condition 11(b) of Section II of this permit, and shall employ equipment as prescribed in the latest edition of EPA Manual SW 846.
- (f) All analyses performed to meet the requirements of Condition 3 of Section III of this permit must be conducted in accordance with the methods listed below utilizing the Quality Assurance/Quality Control methodology established by the Department.

Parameter	Waste Stream	Method
Heating Value	Incinerator Feed	ASTM D-2015
TCLP Metals ¹	Incinerator Ash	SW-846 1311/6010/7470
Metals ²	Incinerator Feed	SW-846 3052/6010
	Scrubber Blowdown	
Mercury	Incinerator Feed	SW-846 3052/7470/7471
	Scrubber Blowdown	

Parameter	Waste Stream	Method
Ash	Incinerator Feed	ASTM D-3174
	Scrubber Blowdown	EPA 160.1/160.2/160.3
Total Chloride	Incinerator Feed	ASTM D-808/D-4327 SW-846 9056
	Incinerator Ash	
	Scrubber Blowdown	
VOC's	Incinerator Feed	SW-846 8260
	Incinerator Ash	
SVOC's	Incinerator Feed	SW-846 3550/8270
	Incinerator Ash	
pH	Scrubber Blowdown	SW-846 9040

¹ Metals include arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver.

² Metals include antimony, arsenic, barium, beryllium, cadmium, chromium, lead, silver and thallium.

- (g) The permittee shall maintain in the written Operating Record required by Condition 7 of Section II of this permit, as per 40 C.F.R. 264.73(b)(3), records and results of all waste analyses performed. Such records and results shall be entered into the written Operating Record as they become available and shall be maintained until closure of the facility.
- (h) The permittee shall maintain the following information as per 40 C.F.R. 270.30(j)(3) in the written Operating Record:
- (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) the analyses were performed;
 - (4) The individual(s) who performed the analysis;
 - (5) The analytical techniques or methods used; and
 - (6) The results of the analysis.
- (i) No changes shall be made to the waste analysis plan without the prior approval of the Division of Solid and Hazardous Waste, Office of Permitting and Technical Programs.

4. Inspection Requirements

Modified 05/12/03

- (a) The permittee shall comply with the inspection requirements of 40 C.F.R. 264.15, 264.174, 264.195, 264.347, 264.1033, and 264.1084 and the plan referenced in Condition 11(b) of Section II of this permit.
- (b) The permittee shall conduct inspections in accordance with the schedule outlined below. Inspections must be performed at the frequencies listed below whenever the incineration system area is in use. The incineration system area is in use when hazardous waste is present anywhere in the incineration system described in Condition 1(a)(1) of Section III of this permit. If an item has not been inspected at its specified frequency as a result of the system not being in use, the permittee shall perform the inspection of the item prior to commencing use of the system:

Safety/Emergency/Security Equipment		
Item	Type of Problem	Frequency of Inspection
Sorbents	Insufficient supply	Monthly
Containers	Corrosion	Monthly
	Damage	Monthly
	Insufficient supply	Monthly
Showers/ Eyewashes	Inoperable	Weekly
	Inadequate pressure	Weekly
Fire extinguishers	Charge	Quarterly
Sprinkler system	Inoperable	Monthly
First aid equipment	Insufficient supply	Monthly
Shovels/rakes	Damage	Monthly
	Insufficient supply	
Personal protective equipment (splash suits, gloves, goggles, face shields, hard hats, etc.)	Damage	Monthly
	Insufficient supply	Monthly
Emergency alarm system	Inoperable	Monthly
Telephones	Inoperable	Daily
Fences	Damage	Monthly
Gates, locks	Damage	Daily
	Inoperable	Daily
Warning signs	Damaged or missing	Daily

Loading/Slurry Process Area		
Item	Type of Problem	Frequency of Inspection
Ground surface	Cracks, spalling, deterioration, wet spots	Daily
Curbing	Deterioration	Daily
Catchment basin	Clogging, inoperable valve	Daily
Pipes, valves, fittings	Leakage, breaks, cracks, corrosion, tampering	Daily
Pumps	Leakage, seal integrity, breaks in lines	Daily
Conveyor	Deterioration, corrosion	Daily
Floors/sumps	Deterioration, standing liquid	Daily

Incineration System		
Item	Type of Problem	Frequency of Inspection
Valves, fittings, pipes	Leaks, corrosion, fugitive emissions, tampering	Daily
Pumps	Leaks, vibration, seal integrity, fugitive emissions	Daily
Structural equipment	Corrosion, deterioration, discoloration, cracks	Daily
Secondary containment	Deterioration, standing liquid	Daily
Automatic waste feed cutoffs	Inoperable	Daily
Process control instrumentation	Inoperable	Daily
Alarms	Inoperable	Daily

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Tank (TK-1, TK-2A, TK-2B, TK-3) and Grinder Areas		
Item	Type of Problem	Frequency of Inspection
Liquid level	Inadequate freeboard	Daily
Tank structure	Corrosion, deterioration, discoloration, cracks, buckles, bulges	Daily
Pipes, valves, fittings	Leaks, corrosion, cracks	Daily
Pumps	Leaks, vibration, seal integrity, fugitive emissions	Daily
Secondary containment	Deterioration, standing liquid	Daily
Waste feed cutoff system	Malfunction	Daily
Supports	Deterioration	Daily
Pressure monitoring and interlock system	Inoperable	Daily
Roof and closure devices	Defects that could result in air pollutant emissions	Prior to initial use, then annually
Closed-vent system	Defects that could result in air pollutant emissions	Prior to initial use, then annually

Added 05/12/03

Solvent Waste Transfer Area		
Item	Type of Problem	Frequency of Inspection
Containers	Leaks, damage, deterioration	Weekly
Containment system	Accumulated precipitation and waste, damage, deterioration	Weekly

- (c) The permittee must remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem

does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

Added 05/12/03

Defects that could result in air emissions from tank roofs/closure devices and the closed-vent system shall be repaired in accordance with 40 C.F.R. 264.1084(k) and 40 C.F.R. 264.1033(l)(3), respectively.

- (d) The permittee must record the results of the required inspections in an inspection log or summary. The permittee must keep these records at the facility for at least three (3) years from the date of inspection. At a minimum, these records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

5. Air Emission Standards for Equipment Leaks

- (a) The permittee shall mark each piece of equipment that is subject to 40 C.F.R. Part 264 Subpart BB in such a manner that it can be distinguished readily from other pieces of equipment. The table below lists each piece of equipment subject to the requirements of 40 C.F.R. Part 264 Subpart BB, its location, and the type of service for which the equipment is authorized:

Modified 05/12/03

Equipment Identification¹	Equipment Type	Location	Service²
P-1	Pump	Under TK-1	HL
CV-452	Auto Valve	Under TK-1	HL
CV-453	Auto Valve	Discharge of P-1	HL

Equipment Identification¹	Equipment Type	Location	Service²
FE-500	Flow Element	Discharge of P-1	HL
CV-502	Auto Valve	Pipe Header	HL
CV-504	Auto Valve	Pipe Header	HL
CV-442	Auto Valve	Inlet to P-2	HL
P-2	Pump	Near TK-1	HL
CV-443	Auto Valve	Discharge of P-2	HL
FE-444	Flow Meter	Discharge of P-2	HL
CV-501	Auto Valve	Inlet to TK-2A	HL
CV-503	Auto Valve	Inlet to TK-2B	HL
CV-521	Auto Valve	Under TK-2A	HL
P-3A	Pump	Under TK-2A	HL
CV-522	Auto Valve	Lower Re-circulation Header	HL
CV-451	Auto Valve	Under TK-2B	HL
P-3B	Pump	Under TK-2B	HL
CV-452	Auto Valve	Lower Re-circulation Header	HL
CV-561	Auto Valve	Under TK-3	HL
P-3C	Pump	Under TK-3	HL
CV-562	Auto Valve	Lower Re-circulation Header	HL
CV-524	Auto Valve	Lower Re-circulation Header	HL
CV-525	Auto Valve	Lower Re-circulation Header	HL
CV-543	Auto Valve	Lower Re-circulation Header	HL
CV-544	Auto Valve	Lower Re-circulation Header	HL
CV-545	Auto Valve	Lower Re-circulation Header	HL
CV-563	Auto Valve	Lower Re-circulation Header	HL
CV-564	Auto Valve	Lower Re-circulation Header	HL
CV-565	Auto Valve	Lower Re-circulation Header	HL
FE-581	Flow Meter	Lower Re-circulation Header	HL
CV-582	Auto Valve	Rotary Kiln Inlet	HL
P-5	Pump	Rotary Kiln Inlet	HL

CV-527	Auto Valve	Upper Re-circulation Header	HL
CV-566	Auto Valve	Upper Re-circulation Header	HL
CV-547	Auto Valve	Upper Re-circulation Header	HL
CV-567	Auto Valve	Upper Re-circulation Header	HL
CV-586	Auto Valve	Rotary Kiln Inlet	HL
CV-610	Auto Valve	Rotary Kiln Inlet	HL
FE-616	Flow Meter	Rotary Kiln Inlet	HL
P-25	Pump	Solvent Transfer Area	LL
FE-650	Flow Meter	Solvent Transfer Area	LL
CV-651	Auto Valve	Rotary Kiln Inlet	LL
CV-658	Auto Valve	Solvent Transfer Area	Vapor

- ¹ The permittee shall identify and assign numbers to flanges after construction, but prior to commencing operation.
- ² HL means "in heavy liquid service" and LL means "in light liquid service" as defined in 40 C.F.R. 264.1031.

Modified 05/12/03

- (b) Equipment authorized in Condition 5(a) of Section III of this permit for heavy liquid service shall not be placed in light liquid service or in gas/vapor service as defined in 40 C.F.R. 264.1031. Equipment authorized for light liquid service may be placed in heavy liquid service.

Modified 05/12/03

- (c) For equipment authorized in Condition 5(a) of Section III of this permit for heavy liquid service and for flanges and other connectors, the permittee shall comply with the standards of 40 C.F.R. 264.1058.

For pumps in light liquid service and valves in gas/vapor or light liquid service authorized in Condition 5(a) of Section III of this permit, the permittee shall comply with the standards of 40 C.F.R. 264.1052 and 1057, respectively. However, equipment that contacts hazardous waste with an organic concentration of at least ten percent (10%) by weight for less than three hundred hours (300 hrs) per calendar year is excluded from these requirements.

- (d) The permittee shall comply with the test methods and procedures requirements of 40 C.F.R. 264.1063.
- (e) The permittee shall comply with the recordkeeping requirements of 40 C.F.R. 264.1064 for the equipment listed in Condition 5(a) of Section III of this permit, including flanges subject to 40 C.F.R. Part 264 Subpart BB that will be identified after construction.

Added 05/12/03

- (f) The permittee shall comply with the reporting requirements of 40 C.F.R. 264.1065.

6. Closure of Hazardous Waste Management Units (40 C.F.R. 264.110)

- (a) At the time of final closure, the permittee shall close the hazardous waste incineration system, including all slurry preparation, incineration, air pollution control, storage and ancillary equipment, in accordance with the closure plan referenced in Condition 11(b)(6) of Section II of this permit, 40 C.F.R. 264.110 through 115, 197, 351, and 601, and the following requirements:
 - (1) Within ninety (90) days after the incineration system receives the final volume of hazardous wastes, the permittee shall remove the hazardous waste from the slurry preparation, incineration, air pollution control, storage and ancillary equipment and shall decontaminate all equipment that has come in contact with hazardous waste.

All hazardous waste residues and refractory shall be removed from the rotary kiln and secondary combustion chamber and shall be shipped off-site to an

authorized hazardous waste facility. The rotary kiln, secondary combustion chamber and associated equipment shall be disassembled. Equipment that may be contaminated with energetic material shall be decontaminated as required by Condition 6(a)(2) of Section III of this permit.

All hazardous waste remaining in the slurry preparation equipment, including but not limited to, the drum dumpers, hoppers, grinder, conveyor belt, metal detector, slurry mix and holding tanks, re-circulation loop and other associated piping and appurtenances, shall be removed and placed in containers. All lines shall be flushed with tap water, and the flushed material shall be placed in containers. This material shall be shipped off-site to an authorized facility. The slurry preparation equipment shall be disassembled.

Equipment that has come in contact with energetic material shall be decontaminated as required by Condition 6(a)(2) of Section III of this permit.

Added 05/12/03

All P&E contaminated solvent waste remaining in the solvent transfer station and associated piping shall be placed in containers. All piping that had come in contact with the P&E contaminated solvent waste shall be flushed with an appropriate solvent, and the flushed material shall be placed in containers. The containers of P&E contaminated solvent waste and flushed material shall be shipped off-site to an authorized facility.

Hazardous waste residuals, refractory, fabric filters and scrubber packing shall be removed from the air pollution control equipment and placed in containers. This material shall be shipped off-site as hazardous waste to an authorized facility. Fiber reinforced plastic surfaces, including the scrubber tower and exhaust stack, shall be disassembled and shipped off-site to an authorized facility. The remaining air pollution control equipment shall be disassembled, and the equipment that may have come in contact with hazardous waste shall be decontaminated as required by Condition 6(a)(2) of Section III of this permit.

- (2) All equipment that may have come in contact with hazardous waste, and that is not being shipped off-site to an authorized facility as hazardous waste, shall be decontaminated. Equipment that may have come in contact with energetic material may be decontaminated in the permittee's hot air decontamination facility or may be steam cleaned. Equipment that has come in contact with hazardous waste other than energetic material shall be steam cleaned. Any residues generated as a result of equipment decontamination shall be collected and shipped off-site to an authorized facility.

Hot air decontamination shall be verified by the use of temperature sensitive inks that shall be painted on the equipment. Steam cleaning decontamination shall be verified by collecting and analyzing rinse waters from each piece of equipment for metals, volatile organic compounds and semi-volatile organic compounds in accordance with the methods provided in SW-846. Results of the analyses shall be submitted to the Department for review.

After all equipment is removed, the concrete floors, curbing, sumps and trenches in the waste feed preparation area, the incinerator area and the scrubber blowdown tank area shall be decontaminated. The surfaces shall be washed with detergent and rinsed with clean water. To verify decontamination, the rinse water shall be collected from each area and analyzed for metals, volatile organic compounds and semi-volatile organic compounds in accordance with the methods provided in SW-846. Results of the analyses shall be submitted to the Department for review. Based on

laboratory analyses, the residues generated from the decontamination of the secondary containment areas shall be shipped off-site to an authorized facility or discharged to the permittee's wastewater treatment plant.

- (3) The permittee must complete closure activities within one hundred eighty (180) days after the incineration system receives the final volume of hazardous waste.

- (4) Within sixty (60) days of completion of closure of the incineration system, the permittee shall submit to the Department, at the address listed in Condition 10(a) of Section II of this permit, by registered mail, a certification that the incineration system has been closed in accordance with the specifications in the approved closure plan and the conditions of this permit. The certification must be signed by the permittee and signed and sealed by an independent registered professional engineer licensed in the State of New Jersey. Documentation supporting the independent registered professional engineer's certification, including the results of any analyses required above, must be submitted prior to or with the certification.
- (5) The Department will review the submitted certification and supporting documentation and will conduct a closure certification inspection. Based on the certification, supporting documentation and inspection, the Department will determine whether closure is complete. If the Department determines that the certification, the supporting documentation or the implementation of closure activities are unsatisfactory, the Department may require the submittal of additional information and/or the performance of additional closure activities.
- (b) The permittee shall keep a copy of the closure plan and all approved revisions to the plan at the facility until closure is completed.
- (c) The permittee shall amend the closure plan any time changes in operating plans or facility design affect the closure plan, whenever there is a change in the expected year of closure of the facility or, in conducting closure activities, unexpected events require a modification to the approved plan. The permittee must comply with the requirement cited at 40 C.F.R. 264.112(c)(3) for amendment of closure plan.
- (e) The permittee shall notify the Department at least forty-five (45) days prior to the date the permittee expects to begin closure of the incineration system, except in cases where the facility's permit is terminated or if the facility is otherwise ordered by judicial decrees or compliance order to close. The date when the permittee "expects to begin closure" shall be within thirty (30) days after the date on which the permittee expects to receive the final volume of wastes.

7. Construction/Installation Requirements

Modified 05/12/03

- (a) The permittee shall construct the incineration system in accordance with the referenced permit application documents and engineering drawings cited in Condition 11 of Section II of this permit.

- (b) The permittee shall not commence treatment and storage of hazardous waste in the incineration system until:
 - (1) The permittee submits to the Department, by certified mail or hand delivery, a letter signed by the permittee and a registered professional engineer licensed in New Jersey stating that construction has been completed in accordance with the cited documents and approved drawings.
 - (2) The Department inspects the construction to determine whether or not it is in compliance with the layout and specifications of the cited documents and approved drawings. If within fifteen (15) days of the date of submission of the letter required by the paragraph above, the permittee has not received notice from the Department of intent to inspect, prior inspection is waived and the permittee may commence treatment and storage of hazardous waste in accordance with Condition 1 of Section III of this permit.

If the Department determines that the incineration system has been constructed in compliance with the approved design, the permittee may commence treatment and storage of hazardous waste in accordance with Condition 1 of Section III of this permit.

If the Department determines that the incineration system has not been constructed in accordance with the approved design, the permittee shall submit to the Department a plan outlining how the facility will be brought into compliance. The plan shall be subject to the Department's approval. Treatment and storage of hazardous waste shall not commence until the plan is implemented to the Department's satisfaction.

8. Trial Burn Requirements

The permittee shall conduct a trial burn on the hazardous waste incinerator to determine the feasibility of compliance with the hazardous waste incinerator performance standards and to determine allowable incineration operating conditions to apply for the duration of this permit. The trial burn activities shall be conducted in accordance with the following:

Modified 05/12/03

- (a) All trial burn activities shall be performed in accordance with this condition of the permit and the Comprehensive Performance Test Plan for Explosive Waste Incinerator Picatinny Arsenal, New Jersey, Revision 1, dated August 2001, prepared by IT Corporation.

- (b) The permittee shall notify the parties listed in Condition 8(s) of Section III of this permit in writing at least thirty (30) days before the commencement of the trial burn.
- (c) Prior to commencement of testing, use of the incinerator CEM's must be approved by the Department. Be advised that this approval must be obtained for the trial burn tests to be considered valid.
- (d) The permittee shall operate the incinerator during the trial burn with the same personnel and controls as during daily operation of the incinerator.
- (e) No testing shall be conducted during conditions which, in the opinion of the senior stack tester or Department observer, pose a safety hazard to operating or stack testing personnel (i.e. heavy precipitation, excessive winds, etc.), or when mechanical malfunctions occur which prevent conformance with any operating conditions.
- (f) No testing shall be initiated unless an official observer assigned by the Department is present. The individual so designated will have the authority to order cessation of all operations upon his or her determination of a system malfunction or violations of the conditions of this permit and will serve as the Department contact for rescheduling in the case of malfunctions or other delays. The official observer will be authorized to order a restart of the trial burn after a malfunction or process upset has been identified and corrected to the official observer's satisfaction, provided any on-site changes that occur do not significantly alter the intent and results of the trial burn. The Department reserves the right to send any number of observers deemed appropriate. One individual will be identified as the official observer with the above authority.
- (g) During the trial burn, the permittee shall operate and maintain monitoring systems as required by Condition 1(a)(6) of Section III of this permit. In addition, during the trial burn, the permittee shall operate and maintain systems to continuously monitor and record the following parameters:
 - (1) Dichlorobenzene spike feed rate;
 - (2) Lead nitrate spike feed rate; and

- (3) Ash spike feed rate.
- (h) During initial start-up and system checks, only fuel oil shall be fed to the incinerator system. This period shall be of sufficient duration to bring the system safely to the operating parameters specified in Condition 8(i) of Section III of this permit and to satisfy the operator and the Department observer that the unit is functioning properly. Once this has been achieved, the test material specified in Condition 8(j) of Section III of this permit may be fed to the incinerator.

After the incineration system is at steady state within the operating parameters specified in Condition 8(i) of Section III of this permit while feeding test material, the trial burn tests shall be conducted in accordance with Condition 8(k) of Section III of this permit.

- (i) Incineration system operating parameters for trial burn testing shall be:
 - (1) For the low temperature test, the temperature of the combustion gases at the exit of the rotary kiln shall be approximately one thousand four hundred degrees Fahrenheit (1,400°F);
 - (2) For the high temperature test, the temperature of the combustion gases at the exit of the rotary kiln shall be approximately one thousand nine hundred degrees Fahrenheit (1,900°F);
 - (3) For the low temperature test, the temperature of the combustion gases at the exit of the secondary combustion chamber shall be approximately one thousand eight hundred degrees Fahrenheit (1,800°F);
 - (4) For the high temperature test, the temperature of the combustion gases at the exit of the secondary combustion chamber shall be approximately two thousand two hundred degrees Fahrenheit (2,200°F);
 - (5) The pressure in the rotary kiln shall not exceed -0.08 inches wc;
 - (6) The flow rate of combustion gas as measured at the stack shall be approximately one thousand two hundred thirty actual cubic feet per minute at one hundred ninety degrees Fahrenheit (1,230 acfm @ 190°F);
 - (7) The temperature of the combustion gases at the exit of the quench tank shall not exceed four hundred seventy-five degrees Fahrenheit (475°F);
 - (8) The differential pressure across the baghouse shall be maintained at no less than one inch water column (1" wc);

- (9) The temperature of the combustion gases entering the scrubber shall not exceed two hundred twenty-five degrees Fahrenheit (225°F);
- (10) The flow rate of recycle scrubber water shall be approximately twenty gallons per minute (20 gal/min);
- (11) The pH of the water exiting the scrubber shall be approximately five (5);

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- (12) The flow rate of scrubber blowdown shall be approximately two gallons per minute (2 gal/min);
- (13) The concentration of CO in the stack gas shall not exceed one hundred parts per million by volume (100 ppmv) on an hourly rolling average corrected to seven percent (7%) O₂, dry gas basis; and

Added 05/12/03

- (14) The secondary power input to the WESP shall be approximately four kilovoltamperes (4 KVA).

Modified 05/12/03

- (j) The test material for the trial burn shall be as follows:

- Test 1: Approximately four hundred pounds per hour (400 lbs/hr) of water/M1 propellant slurry at a 3/1 ratio along with spikes of fly ash and 1,2-dichlorobenzene.
- Test 2: Approximately four hundred pounds per hour (400 lbs/hr) of water/M1 propellant slurry at a 3/1 ratio along with spikes of fly ash, 1,2-dichlorobenzene, lead and chromium.
- Test 3: Approximately one hundred twenty lbs per hour (120 lbs/hr) of dunnage material fed in twenty pound (20 lb) charges every ten minutes (10 min).
- Test 4: Approximately four hundred pounds per hour (400 lbs/hr) of water/M1 propellant slurry at a 3/1 ratio.

Modified 05/12/03

- (k) The trial burn shall consist of four (4) tests: Test 1 is a low combustion temperature test, Test 2 is a high combustion temperature test, Test 3 is a dunnage test, and Test 4 is a particle size distribution test. Each test shall consist of three (3) runs at the set of operating conditions specified in Condition 8(i) of Section III of this permit. A run shall consist of the concurrent collection of the samples described in Condition 8(m) of Section III of this permit while the test material is being fed to the incinerator and the operating conditions remain consistent.

- (l) During the trial burn, the following occurrences shall be cause for automatic cut-off of all test material feed and immediate cessation of the trial burn sampling. Actual incinerator interlocks may be set at values more conservative than those specified below. The permittee shall demonstrate all interlocks to the Department's official observer prior to commencing the trial burn:
 - (1) The concentration of CO in the stack gas corrected to seven percent (7%) O₂, dry gas basis, exceeds one hundred parts per million by volume (100 ppmv) on an hourly average;
 - (2) The pressure in the rotary kiln exceeds -0.08 inches wc;
 - (3) The temperature of the combustion gases exiting the quench tank exceeds four hundred seventy-five degrees Fahrenheit (475°F); and
 - (4) The pressure differential across the baghouse reduces to less than one inch water column (1" wc).

Modified 05/12/03

(m) The permittee must collect the following samples during the trial burn:

Sample	Frequency	Method
M1/Water Slurry	Grab samples at 15 minute intervals throughout each run. Composite samples over a run. ^(a)	S004, ASTM D-4057
Dichlorobenzene Spiking Solution	One grab sample and one drum composite sample from each lot used. ^(a)	S004, ASTM D-4057
Metals Spiking Solution	One grab sample at the beginning and end of each run. ^(c)	S004, ASTM D-4057
Ash Spiking Solution	One grab sample at the beginning and end of each run. ^(a)	S004, ASTM D-4057
Auxiliary Fuel	One grab sample at the end of each run. ^(d)	S004, ASTM D-4057
Makeup Water	One grab sample at the start of each run. ^(a)	S004, ASTM D-4057
Scrubber Blowdown	Grab samples at 30 minute intervals throughout each run. Composite samples over a run. ^(d)	S004, ASTM D-4057
Kiln Ash	One sample at the end of each run. ^(a)	S007, ASTM D-4057
Quench Ash	One sample at the end of each run. ^(a)	S007, ASTM D-4057
Baghouse Ash	One sample at the end of each run. ^(a)	S007, ASTM D-4057
Caustic Feed	One grab sample at the start of each run. ^(a)	S004, ASTM D-4057
Cooling Tower Blowdown	One grab sample at the end of each run. ^(d)	S004, ASTM D-4057

Sample	Frequency	Method
Stack Gas	Integrated samples by 3 EPA Modified Method 5 sampling trains ^(b)	Method 0010 Method 0023A Method 3542
	Integrated samples by VOST sampling train. ^(b)	Method 0031
	Integrated samples by STEM sampling train ^(b)	Method 0010 Method 3542 STEM
	2 Tedlar Bags and condensate per run. ^(b)	Modified Method 0040
	Integrated samples by M5 Multi-Metals sampling train ^(c)	Method 0060
	Integrated samples by Method 0050 sampling train. ^(c)	Method 5 Method 0050
	Integrated samples by NJ Method 5 Train ^(e)	NJ Method 5
	2 Tedlar bags per run ^(a)	Methods 3 and 3A
	Integrated samples by cascade impactor sampling train ^(f)	Cascade impactor

- (a) Sample shall be collected during Tests 1 & 2.
 (b) Sample shall be collected during Test 1.
 (c) Sample shall be collected during Test 2.
 (d) Sample shall be collected during Tests 1, 2 & 3.
 (e) Sample shall be collected during Tests 2 & 3.
 (f) Sample shall be collected during Test 4.

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- (n) The permittee shall have the trial burn samples analyzed for the parameters, and by the methods, listed in the following table:

Parameter	Sample	Analytical Method
Heat Content	M1/Water Slurry	ASTM D-2015, D-1989, D-240, D-2382
	Dunnage Feed	
	Auxiliary Fuel	
Ash Content	M1/Water Slurry	ASTM D-482, D-3174
	Auxiliary Fuel	

Parameter	Sample	Analytical Method
	Ash Spiking Solution	
	Scrubber Blowdown	
	Makeup Water	
Density	M1/Water Slurry	ASTM D-70, D-854
	Kiln Ash	
	Quench Ash	
	Baghouse Ash	
	Ash Spiking Solution	
	Auxiliary Fuel	
	Metals Spiking Solution	
	Dunnage Feed	
Total Chlorine	M1/Water Slurry	ASTM D-808, E-442, D-4327
	Makeup Water	
	Auxiliary Fuel	
Elemental Analysis	M1/Water Slurry	ASTM D-3176
Moisture	M1/Water Slurry	ASTM D-2216
	Kiln Ash	
	Quench Ash	
	Baghouse Ash	
Metals	M1/Water Slurry	SW-3050/3051 SW-6010/6020
	Kiln Ash	
	Quench Ash	
	Baghouse Ash	
	Scrubber Blowdown	
	Metals Spiking Solution	
	Makeup Water	
	Caustic Feed	
	Multi-Metals Train	SW-0060, SW-6010
Mercury	M1/Water Slurry	SW-7470 or SW-7471
	Kiln Ash Residue	
	Quench Ash	
	Baghouse Ash	
	Scrubber Blowdown	
	Makeup Water	
	Caustic Feed	
	Metals Spiking Solution	
	Multi-Metals Train	SW-0060, SW-7470
TDS/TSS/TS	Cooling Tower Blowdown	EPA 600 – Method 160.1, 160.2, 160.3
	Scrubber Blowdown	
BOD	Scrubber Blowdown	EPA Method 405.1

Parameter	Sample	Analytical Method
	Cooling Tower Blowdown	

Parameter	Sample	Analytical Method
Dichlorobenzene	M1/Water Slurry	SW-3540, SW-3550, SW-8270
	Kiln Ash	
	Baghouse Ash	
	Quench Ash	
	Caustic Feed	SW-3510, SW-3520, SW-8270
	Makeup Water	
	Scrubber Blowdown	
Dinitrotoluene	M1/Water Slurry	SW-3540, SW-3550, SW-8091
	Kiln Ash	
	Baghouse Ash	
	Quench Ash	
	Makeup Water	SW-3510, SW-3520, SW-8091
	Scrubber Blowdown	
	Caustic Feed	
Semivolatile PIC's and Dichlorobenzene	Modified Method 5 Sampling Train	SW-3542, SW-3540, SW-3510, SW-8270
2,4-Dinitrotoluene	Modified Method 5 STEM	SW-3540, SW-3542, SW-3520, SW-8091
Volatile PIC's	VOST Condensate	SW-0031, SW-8260
	VOST Tubes	SW-0031, SW-8260, SW-5041
Dioxins/Furans	Modified Method 5 Sampling Train	SW-0023A, SW-8290
Volatile Unspeciated Mass	Method 0040 Tedlar Bags	SW-0040, SW-8015
	Method 0040 Condensate	SW-0040, SW-5030, Modified SW-8015
Semivolatile Unspeciated Mass	Modified Method 5 Train	SW-3510, SW-3540, SW-8015
Non-volatile Unspeciated Mass	Modified Method 5 Train	SW-3510, SW-3540, EPA 160.3
PAHs	Modified Method 5 Train	SW-3510, SW-3540, SW-3542, SW-8290, Modified Carb 429
Hydrogen Halides and Halogens	Method 5 Train	SW-9056, SW-9057
Particulate	Method 0050 Train	EPA Method 5
	NJ Method 5 Train	NJ Method 5

Parameter	Sample	Analytical Method
O ₂ , CO ₂	Tedlar Bags	EPA Method 3
Particle Size Distribution	Cascade Impactor	Method 201A

- (o) The permittee shall provide copies of all stack sampling data sheets, continuous monitor strip charts or data logger outputs, and other data collected during the trial burn to the Department's observers at the end of each day of testing.
- (p) The permittee shall submit the following to the parties listed in Condition 8(s) of Section III of this permit within ninety (90) days of completion of the trial burn:
 - (1) A certification that the trial burn has been carried out in accordance with the approved trial burn plan;
 - (2) The determinations required by this Condition 8(q) of Section III of this permit and 40 C.F.R. 270.62(b)(7); and
 - (3) The Notification of Compliance required by 40 C.F.R. 63.1207(j).
- (q) The trial burn results required by Condition 8(p)(2) of Section III of this permit shall include, but not be limited to:
 - (1) All summary and raw data for each trial burn run developed from the sampling and analyses required by Conditions 7(m) and (n) of Section III of this permit;

- (2) Calculations of the destruction and removal efficiencies in accordance with 40 C.F.R. 264.343(a) for 2,4-dinitrotoluene and dichlorobenzene for each trial burn run of the low temperature test;
 - (3) The chlorine and hydrogen chloride emission rates (reported individually in grams per hour and as combined emissions in ppmv, HCl equivalents, dry basis, corrected to 7% O₂) calculated for each run of the trial burn test during which the chlorine feed rate is maximized;
 - (4) The particulate emission rates (reported in grains per dry standard cubic foot corrected to seven percent oxygen) calculated for each run of the trial burn test during which the ash feed rate is maximized;
 - (5) The emission rates of metals for which standards are provided in 40 C.F.R. 63.1203 (reported in grams per hour and in $\mu\text{g}/\text{dscm}$ corrected to 7% O₂) calculated for each trial burn run used to demonstrate compliance with the metals emission standards;
 - (6) The emission rates of dioxins and furans (reported in grams/hour and in ng TEQ/dscm corrected to 7% O₂) calculated for each run of the trial burn test;
 - (7) The emission rates of all other constituents needed to perform the post-trial burn risk assessment required by Condition 8(r) of Section III of this permit;
 - (8) Mass balances for 2,4-dinitrotoluene and dichlorobenzene for each trial burn run of the low temperature test;
 - (9) The continuous monitor strip charts or data logger outputs and the calculated mean, minimum and maximum values of the parameters listed in Condition 1(a)(6)(i) of Section III of this permit for each trial burn run;
 - (10) The monitoring records required by Condition 1(a)(6)(ii) of Section III of this permit for each run of the trial burn;
 - (11) An identification of sources of fugitive emissions from the incineration system and their means of control;
 - (12) Copies of records of all calibrations and calibration checks performed for the trial burn; and
 - (13) All other test results required by the Air Pollution Control Permit to Construct and Certificate to Operate.
- (r) Within thirty (30) days of notification of the Department's approval of the trial burn results, the permittee shall submit the results of a risk assessment performed in

accordance with a Department approved Post-Trial Burn Risk Assessment Work Plan.

- (s) All documents that are required to be submitted to the Department by Condition 8 of Section III of this permit shall be submitted to the parties listed below:
 - (1) New Jersey Department of Environmental Protection
Division of Solid and Hazardous Waste
Chief, Bureau of Hazardous Waste and Transfer Facilities
P.O. Box 414
Trenton, NJ 08625-0414
 - (2) New Jersey Department of Environmental Protection
Air Quality Regulation Program
Chief, Bureau of Air Quality Engineering
P.O. Box 027
Trenton, NJ 08625-0027
 - (3) USEPA - Region II
RCRA Programs Branch
Chief, New Jersey Section
290 Broadway
New York, NY 10007-1866

9. Land Disposal Restrictions

- (a) The permittee shall comply with the land disposal restrictions and applicable dates specified in 40 C.F.R. Part 268 for all hazardous waste regulated under this permit. The land disposal of hazardous waste is prohibited unless the applicable treatment standard is met, or the waste is exempt under 40 C.F.R. 268.1(c).
- (b) The permittee shall comply with the waste analysis, notification, certification, and recordkeeping requirements of 40 C.F.R. 268.7 whenever generating, treating, or managing a waste restricted from land disposal.
- (c) The permittee shall comply with the prohibitions on storage of hazardous wastes restricted from land disposal found in 40 C.F.R. 268.50.

Added 05/12/03

10. Air Emission Standards for Tanks

- (a) Tanks TK-1, TK-2A, TK-2B and TK-3 and the grinder authorized by Conditions 1(b) and (c) of Section III of this permit shall comply with the Tank Level 1 standards of 40 C.F.R. Part 264 Subpart CC.

- (b) The permittee shall not place waste in the tanks or grinder unless the tank/grinder system is operating at a pressure range of -0.1 inches to -1.0 inches of water. This pressure range shall be maintained at all times waste is in the tank/grinder system.
- (c) The permittee shall measure the tank/grinder system pressure using a manometer and shall install, calibrate, operate and maintain a system to continuously monitor and record the pressure prior to introduction of waste and at all times waste is in the tank/grinder system.
- (d) The permittee shall install, operate and maintain an interlock system to prevent the addition of waste to the tank/grinder system unless the vent system is operating and the tank/grinder system is operating within the required pressure range.
- (e) The permittee shall place waste in the tank/grinder system such that the uncontrolled emissions to the carbon bed shall not exceed twenty-five percent (25%) of the lower explosive limit.
- (f) At least every thirty (30) operating days, the permittee shall monitor the concentration level of organic compounds in the discharge vent from the carbon bed to verify that the working capacity of the bed is not exceeded. The permittee shall replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated. The permittee shall manage the used carbon in accordance with 40 C.F.R. 264.1033(n). The permittee shall maintain records of monitoring, carbon replacement and disposal in the operating record.
- (g) The permittee shall inspect and monitor air emission control equipment used to comply with 40 C.F.R. Part 264 Subpart CC in accordance with the requirements specified in 40 C.F.R. 264.1084. The permittee shall develop and implement a written plan and schedule to perform the inspections and monitoring required and shall incorporate the plan and schedule into the facility inspection plan required by 40 C.F.R. 264.15.
- (h) The permittee shall prepare and maintain records in accordance with the requirements of 40 C.F.R. 264.1089
- (i) The permittee shall comply with the reporting requirements of 40 C.F.R. 264.1090.

End of Section III